

REMARKS/ARGUMENTS

These remarks are made in response to the final Office Action of December 27, 2007 (hereinafter Office Action). As this response is timely filed within the 3-month shortened statutory period, no fee is believed due. The Office, however, is expressly authorized to charge any deficiencies or credit any overpayments to Deposit Account 50-0951.

Claims Rejections – 35 USC §§ 102 & 103

In the Office Action, Claims 19-20, 24-25, 28-30, 34-35, and 38 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,421,672 to McAllister, *et al.* (hereinafter McAllister). Claims 22-23, 27, 32-33, and 37 were rejected under 35 U.S.C. § 103(a) as being unpatentable over McAllister in view of U.S. Patent 6,256,630 to Gilai, *et al.* (hereinafter Gilai).

Although Applicants respectfully disagree with the claim rejections, Applicants have amended the claims so as to expedite prosecution of the present application. It is expressly noted, however, that the amendments should not be interpreted as the surrender of any subject matter. Accordingly, Applicants respectfully reserve the right to present the original version of any of the amended claims in any future divisional or continuation applications from the present application.

Applicants have amended independent Claims 19, 24, 29, and 34 to further emphasize certain aspects of the invention. As discussed herein, the claim amendments are fully supported throughout the Specification. No new matter has been introduced by the claim amendments.

Certain Aspects Of Applicants' Invention

It may be useful at this juncture to reiterate certain aspects of Applicants' invention. One embodiment of the invention, typified by Claim 19, is a method of disambiguating database search results within a speech interface.

The method can include, responsive to a database search, retrieving multiple database entries including a plurality of common data fields and processing the common data fields of the retrieved database entries according to predetermined disambiguation criteria. The predetermined disambiguation criteria can include excluding any data field having duplicate data items, excluding any data field having at least one data item that is unpronounceable, and excluding any data field having at least one data item that exceeds a predetermined maximum length. See, e.g., Specification, page 5, line 29 to page 7, line 7 and page 7, line 29 to page 8, line 11.

The method also can include, based upon the processing, identifying from among the plurality of common data fields at least one disambiguation data field that satisfies the predetermined disambiguation criteria and selecting one disambiguation data field based on a predetermined selection criterion when more than one disambiguation data field is identified in the identifying step. See, e.g., Specification, page 7, lines 8-17 and page , lines 12-16.

The method further can include presenting, through the speech interface, data items corresponding to the selected disambiguation data field for each retrieved database entry, wherein the speech interface is used in conjunction with a system in which the database search is performed, and wherein the speech interface provides users of the system with an interface for searching for information contained within a database in which the database search was conducted and for audibly receiving results of the database search. See, e.g., Specification, page 5, line 29 to page 7, line 7 and page 7, line 29 to page 8, line 11.

The Claims Define Over The Cited References

The present invention concerns a method for disambiguating database search results within a speech interface. More specifically, the invention can analyze database search results to determine a data field most suitable for uniquely identifying each search result when presented through the speech interface so that a user can select a desired

search result without having to view a listing of the search results on a display. See, e.g., Specification, page 2, lines 2-7.

In order to determine the most suitable data field for uniquely identifying each search result, and to be easily understood by the user when presented via the speech interface, the retrieved database entries can be processed to exclude any data field having duplicate data items, excluding any data field having at least one data item that is unpronounceable, and excluding any data field having at least one data item that exceeds a predetermined maximum length. If after excluding all three types of data fields there are still more than one data field, one data field can be selected based on a predetermined selection criterion (such as data field having data items with a smallest average length) or based on a user input.

McAllister discloses a telephone directory search method utilizing secondary information contained in subscriber listings to disambiguate search results and provide telephone number and other data associated with a desired party. Upon identification of more than one listing for a particular requested named party, the system searches through secondary information for each of the parties to identify distinguishing information which is solicited from the calling party. See the Abstract. However, McAllister does not disclose processing the common data fields of the retrieved database entries by excluding any data field having duplicate data items, any data field having at least one data item that is unpronounceable, and any data field having at least one data item that exceeds a predetermined maximum length.

McAllister discloses that when the prime key (such as a name) is duplicated (i.e., is not unique), the user is prompted to supply additional information determined to be helpful in selecting from among candidate records having the same key (see col. 2, lines 52-65). However, McAllister does not disclose excluding any data field having duplicate data items as in the present invention. For example, in the present invention, the "Name" and "Formal Name" data fields are excluded from candidates as a disambiguation data field because each of them has duplicate data items (see Fig. 1, noting that the "Name"

and "Formal Name" data fields are marked as "Failed Duplicate" in the bottom "analysis" row).

McAllister teaches in col. 4, lines 23-32 reducing the number of candidate listings by eliminating unlikely pronunciations (e.g., a name pronounced "Koch" would not be spelled "c-o-o-k") and asking the caller to spell the name of the party being called. However, McAllister does not disclose excluding any data field having at least one data item that is unpronounceable. For example, in the present invention the data fields "Phone" and "Dept. Number" are excluded from candidates as a disambiguation data field because the data items contained therein cannot be meaningfully pronounced through a speech interface (see Fig. 1, noting that the "Phone" and "Dept. Number" data fields are marked as "Failed Cannot Pronounce" in the bottom "analysis" row).

In addition, McAllister also does not disclose selecting one disambiguation data field based on a predetermined selection criterion or a user input when more than one disambiguation data field is identified. In col. 3, lines 34-54, McAllister describes that the location field is provided together with the name field to the caller. However, the location field is the only unique and pronounceable field in the table as shown in col. 3, lines 10-20. Therefore, McAllister does not disclose selecting one disambiguation data field from more than one disambiguation data field, let alone selecting one disambiguation data field based on a predetermined selection criterion or a user input.

Col. 12, part c, and col. 7, lines 55-60, of Gilai have been cited as disclosing excluding any data field having at least one data item that exceeds a predetermined maximum length. However, after reviewing these passages, it is not clear how they disclose this limitation. What they really disclose is to extract a predetermined number of the highest scoring similarity vector components and store these components in a best candidates box. This has nothing to do with the present invention.

Accordingly, the cited references, alone or even in combination, fail to disclose or suggest each and every element of Claims 19, 24, 29, and 34, as amended. Applicants therefore respectfully submit that amended Claims 19, 24, 29, and 34 define over the

prior art. Furthermore, as each of the remaining claims depends from Claim 19, 24, 29, or 34 while reciting additional features, Applicants further respectfully submit that the remaining claims likewise define over the prior art.


Applicants thus respectfully request that the claims rejections under 35 U.S.C. §§ 102 & 103 be withdrawn.

CONCLUSION

Applicants believe that this application is now in full condition for allowance, which action is respectfully requested. Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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